RESIDENCY TRAINING IN GERIATRIC MEDICINE — 1984*

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Of the many educational opportunities of an academic unit in geriatric medicine, none is more important or more difficult than house staff education. Although all phases of medical education play important roles in laying the foundation for medical practice, this is especially true for the house staff years. Here the physician establishes the priorities, attitudes, skills, and discipline which, together, will mold the quality and style of his future practice.

In addition to their role as learners and as physicians, house staff members play an extremely important role in training undergraduate medical students. By close association with students for 60 to 70 or more hours a week, and especially by their function as role models, the house staff are the most powerful influence on the students' attitudes and work habits and, only to a slightly smaller extent, on their knowledge and skills. This has been emphasized by Cooney,[1] who states: "the key influences on the student are the resident physicians with whom the student works." Therefore, in our efforts to prepare future physicians for the role that nearly all of them will play in caring for the elderly, an effective program of house staff education is the cornerstone.

Unfortunately, a high quality rotation in geriatric medicine for residents in internal medicine and family medicine is extremely difficult to achieve. In part, this reflects the demands and requirements of geriatric medicine itself. It also reflects the wide divergence between the goals, objectives, and pace of most residency programs in internal medicine and that which is ap-

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propriate for experience in geriatric medicine. The time clock of the learning of the medical house staff is set at a rapid pace. Even before the introduction of prospective payment, rapid work-up and prompt discharge was the goal of every intern or resident. By contrast, for many patients, especially the elderly, disease processes evolve over relatively long periods of time. This is recognized in family medicine by establishing the main focus of education in the clinic, where patients are followed throughout the whole period of training. A somewhat similar program has also been established in the so-called "primary care track" in internal medicine. In the classic internal medicine programs, however, which provide the largest segment of teaching for medical students in this country, ambulatory clinic experience is kept to a minimum. The attention of house staff is riveted on immediate problems of inpatient diagnosis and treatment. Opportunities for house staff members to follow patients, worked up in the hospital, over long periods of time after discharge or into settings of intermediate care or rehabilitation receive relatively little emphasis in either house staff time or faculty attention.

I believe, parenthetically, that this pattern reflects at least to some extent the fact that in internal medicine as contrasted with family medicine, salaries for house staff are derived from hospital budgets. Hospitals pay young people to be "shock troops" on the front line of medicine, providing patterns of care which older physicians are often ill equipped, physically unable, and unwilling to provide. This time clock is one of the singular peculiarities and weaknesses of the American system of medical education, and is especially inimical to effective teaching of care of the elderly.

A second aspect of traditional house staff education in internal medicine, unsuited to geriatric practice and education, is the increasing emphasis on complex procedures, especially diagnostic. None of us would quarrel with the astonishing effectiveness of many of these procedures which frequently permit us to make diagnoses more effectively, rapidly, and with less trauma to the patient than in the past. These advantages may be extremely important for older patients. Nevertheless, for many elderly people with multiple diseases and a limited reserve, especially those admitted to a university teaching service, the barrage of diagnostic tests is a poor substitute for skilled history taking and physical examination, good clinical judgment, and common sense. These latter skills are particularly applicable in the practice of medicine among the elderly. While some medical house staff will thrive in an approach that makes full use of these classic tools of internal medicine, reinforced by carefully selected diagnostic modalities, many others feel lost unless buoyed up by page after page of computerized reports of laboratory

data obtained at great cost both financially for society and for the elderly in terms of physical and emotional reserve.

Other factors contribute to the traditional aversion by many medical house staff members to their elderly patients. While social and psychological problems frequently emerge for the elderly as equally important to their medical problems per se, many medical house staff members have little interest in these aspects of care and, with some notable exceptions, few house staff programs effectively address these issues. While the modalities of functional assessment, physical and occupational therapy, and nutrition emerge as highly important aspects of care for the elderly, most programs in internal medicine include almost no instruction in these approaches. Therefore, driven by a motivation to do something to help the patient, the medical house staff and many practicing physicians tend to think in terms of "What medicine can I use?", thereby contributing to the classic problems of polypharmacy. Most young physicians visualize, as their major professional goal, the saving of lives. An older person, for whom life expectancy may be five years at best, may be perceived as a less worthy object of the young physician's talents, time, or skill than that of a person in the early or middle periods of life. Finally, some mention should be made of the 100 or more hour week which is still a treasured part of some programs in internal medicine. How can one possibly expect young people to retain their human values and perspective in programs of this sort? In my view, this tradition, on top of the competition young people face from kindergarten onward as they try to gain entry to medical schools, contributes to the arrogance characteristic of many young physicians, especially internists, and to their difficulties in developing effective team relationships with members of other less intellectually demanding but still important caring professions.

Much of the above can be summarized by the phrase "negative attitude toward the elderly."[2,3] We recently studied factors influencing the attitude of medical students toward the elderly as they proceed through the four-year curriculum of our medical school. As part of the study, we asked students during their third year clerkship in internal medicine to assess the attitudes of the care providers with whom they are associated. Responses showed that, in the students' view, the nurses have the most positive attitude toward the elderly. Another group perceived as having a positive attitude, though less so, are the subspecialty attending physicians in their role as consultants. The "ward visit" is perceived as having a *slightly* negative attitude toward the elderly. The medical house staff is thought by the students to have the most negative attitude of all.

The students, of course, are the same people who, two years later, are perceived by succeeding students as having this decidedly negative attitude. Thus, something about the fourth year clinical clerkship and internship itself contributes to this important change.

The point of these remarks is to emphasize that the problems inherent in the development of an effective teaching program in geriatric medicine for house staff and students in internal medicine extend far beyond the responsibility of the division of geriatric medicine per se. An effective approach to this problem must address the goals and design of the entire program in internal medicine. Further analysis of aspects of the present curriculum, such as those outlined above, will be required, and new models for house staff training must be developed and evaluated[4] before the clinical training of our future physicians can become responsive to the emerging fact that most of their practice will be with elderly patients.

In the meantime, how can divisions or programs of geriatric medicine engender in house staff members the positive attitude required for the care of elderly patients and command of the knowledge and skills necessary to do this job and to enjoy it?

In developing my response to this question I have decided to sharpen my focus in two ways: first, by directing attention entirely to house staff training in medicine — primarily internal medicine but also family medicine. I do not mean to belittle the importance or accomplishments of geriatric training in other disciplines, especially psychiatry, but constraints of time and my own knowledge indicate a sharper focus.

Second, I have focused attention on the experience of those medical schools and hospitals that have established organized units in geriatric medicine. In the development of any field, such as endocrinology or rheumatology, one does not look for leadership and innovation to generalists who add a part-time responsibility for teaching that particular subject to a long list of other activities. One looks to people who have made a full-time commitment to teaching, research, and patient care in the area in question. This report will review, in a general way, the experience and ideas of a group of 30 faculty members from different medical schools, all specialists in geriatric medicine, who have assumed responsibility for the leadership of established academic units in this field.

In designing this study, I somewhat arbitrarily defined an "established academic unit" in this field by two criteria: the presence of at least two full-time faculty members and receipt of program-type grant support from a federal agency, specifically the National Institute on Aging. I have been able

to identify 37 units of this sort as of April 1984. Allowing for a few more that should also be included, this means that formal geriatric units have been established in more than one third of this country's medical schools. This represents a striking contrast to the situation seven years ago when it has been estimated that there were only seven such units or programs.[5] Faculty members from 30 of these units responded to my initial questionnaire, thus providing the basis for this progress report.

An academic unit or division can impact on a house staff program in several ways. One is through the presentation and discussion of cases or topics at weekly medical grand rounds. In one third of the reporting units this was done one or two times yearly. In another five units it was done three or four times yearly. In other units, grand rounds presentations were scheduled between eight and forty-four times annually. This latter pattern was applicable to affiliated hospitals devoted primarily to long-term care, such as the Monroe Community Hospital in Rochester, and is not typical of our teaching hospitals. While programs of this sort represent a valuable adjunct to teaching, it seems unlikely that occasional grand rounds presentations will make a significant contribution to the development of knowledge and skills on the part of the residents.

Another avenue is through establishment of a program of "teaching consults" in geriatric medicine. Reporting units are divided approximately equally among those in which these are made by geriatric physicians only, by interdisciplinary teams, or by both. In our experience, requests for geriatric consultation from general medical teaching services are motivated primarily by desire for assistance in obtaining patient "placement". While other teaching functions can also be approached, Dr. Paul Katz of our own unit[6] suggests that the effectiveness of these consultations may depend not so much on the quality of the consult itself, as on the attitude to and knowledge of geriatrics on the part of the house staff requesting the consultation.

A third approach assigns to the residents responsibility for following patients in a long-term-care facility, either an independent nursing home or a long-term-care facility which is part of the main teaching hospital. Fewer than half of the programs include this pattern. While there was general agreement that there is much that the resident can learn through a rotation of this sort, it is our observation, based on talking with house staff members who rotate to our service from other teaching centers, that this pattern is only effective if it is part of an intensive and comprehensive learning experience in geriatrics.

The approach to house staff education which is emerging as the major mo-

dality for teaching geriatric medicine to medical residents is that of a mandatory intensive block-type rotation in geriatrics.[7] While this pattern has been recommended in a number of published reports, its implementation is by no means easy, and requires strong support from the chairman of the department of medicine and/or head of the residency training program. Table I presents the data in this regard. Eighty-three percent of the units reporting offer rotations, either elective or mandatory, for residents in internal medicine. Mandatory block-type rotations are more characteristic of internal medicine training programs than of family medicine, being offered in internal medicine by 60% of the reporting units and, in family medicine, by only 13%. Nineteen units (63%) reported that mandatory rotations in either internal or family medicine were part of their program. It should be noted, however, that in a number of instances programs which presented themselves as requiring mandatory rotations for house staff do so for only a small percentage of the residents. Six of the 18 units which stated that rotations are required for residents in internal medicine apparently require these rotations for 30% or fewer of the residents. Thus, if one focuses on programs that require rotations in geriatrics for more than half of their residents, the number shrinks to 13 (40%). In three centers mandatory rotations are required both in internal and family medicine. At one of these units the rotation is not strictly required, but is a selective; the residents are required to undertake a rotation in geriatrics or alcoholism-drug addiction; most opt for geriatrics.

The conclusion that 43% of the established academic units in geriatric medicine provide mandatory house staff rotations for most of the residents in medicine and/or family medicine represents an interesting evolutionary pattern. During most of the decade of the 1970s there were, in this country, approximately five established geriatric medicine centers. It is my perception, based on careful study of the excellent report of Robbins et al.,[8] that mandatory rotations in internal medicine were offered in three: the University of Rochester/Monroe Community Hospital, the Baltimore City Hospital, and Louisiana State University. By 1978 the number of established academic geriatric units had increased to seven, but the number of these units which provided mandatory house staff rotations was still small. By 1979, at the time of the initial review by Robbins et al.,[8] established academic units had increased to approximately 28; 21% of these offered mandatory house staff rotations. At the time of our survey in 1984, with a modest further increase in the number of academic geriatric centers to perhaps 40, the percentage offering mandatory house staff rotations to half or more of the residents had more than doubled.

TABLE I. BLOCK TYPE ROTATION IN GERIATRICS
(30 Units Reporting)

A. *Internal medicine*
Total units offering block rotation: 25(83%)

Mandatory	*18(60%)*
Percent of residents participating	Number of units
100%	8
90%	1
50-75%	3
20-30%	5
10%	1
Elective	*8(27%)*
(Currently electing)	
4 residents	2
2 residents	3
1 resident	1
0	1
Both	*4(13%)*

B. Family medicine (30 units reporting)
Total units offering block rotation: 8(30%)

Mandatory	*4(13%)*
Percent of residents participating	
100%	3
4%	1
Elective	*4(13%)*
Number of residents participating	
1 4	
3	1
2	2

C. Internal medicine, family medicine or both
Total units offering mandatory block rotation: 13(43%)

Two facts emerge from this preliminary survey. First, the percentage of academic units which offer required rotations for house staff is increasing significantly. Second, this trend is much more evident in internal medicine than in family medicine. The reason for the latter differentiation relates, I believe, to the different design of the overall training programs in these two specialties. Placing less emphasis, as they do, on intensive care and inpatient-based diagnostic workups, the design of family medicine programs is much closer to that which one would expect in a program in geriatric medicine than the traditional program in internal medicine. Holtzman et al.[9] have pointed out that students intending to enter primary care specialties have a

much more positive attitude toward the elderly than students pointing toward careers in subspecialties. It is our experience that members and graduates of family medicine residency programs adjust more readily to an experience in geriatric medicine than do residents in internal medicine. Thus, it seems reasonable that effective teaching of geriatrics to family medicine residents may be achieved through a "learn-as-you-go" approach, which would probably not be effective for residents in internal medicine.

In considering the motivations which have influenced directors of residency programs in internal medicine to support block rotation in geriatrics, several possibilities emerge. They may have become convinced of the importance of teaching geriatrics and the need to include this subject in their residency training programs. They may have been persuaded along these lines through the eloquence of the program directors in geriatrics. Another possibility relates to the fact that program directors in internal medicine need to keep an open mind toward potential sources of financial support for the department as a whole. The availability of support for geriatric medicine from national sources, while less than many of us would like, is still greater in proportion to the number of qualified applicants than is true for many other fields of medicine. In some instances, such as the Veterans Administration system, this support, in the form of GRECCS, is available *only* to hospitals which include a mandatory rotation in geriatrics for house staff.[10] Seven of the 13 centers which offer mandatory house staff rotations in geriatrics are based at VA Medical Centers.

What are the educational objectives sought by the directors of those academic units which offer mandatory rotations in geriatric medicine? What do they try to accomplish? A compendium of 119 teaching objectives for house staff education has been developed by Robbins et al.[8] based on a questionnaire sent to more than 100 geriatricians in the United States, Canada, and Great Britain. Other shorter but less comprehensive lists have been developed by other authorities and committees, representing both internal medicine and family medicine.[11,12] The directors of the 13 programs which provide mandatory rotations for more than half of the house staff members in medicine or family medicine were polled concerning the objectives they try to achieve. Through a pattern of negotiation among the eight who have responded so far and the associate director of our own geriatrics group, a list of 22 objectives has been drawn up and is summarized in Table II. In this table, objectives are listed in the order of priority assigned to them by the participating faculty. The table also depicts, by a series of asterisks, the priority assigned to each objective in the larger study by Robbins et al.;[8]

by a series of pluses (+) or minuses (−) the value placed on these learning objectives in a curriculum guideline for family medicine residents;[11] and by a number (1, 2, or 3) the priority assigned by the chiefs of general internal medicine at two of the major teaching hospitals in Buffalo. There is close agreement concerning the priority of these objectives.

Finally, the table lists the teaching sites which the participating faculty feel provide the most appropriate setting for teaching each of the specific objectives. This is important because, in attempting to make the best use of the short time available, selection of these sites should be based upon specific teaching objectives rather than service obligations or political considerations. The list of sites is similar to that recommended, for geriatric fellowship training by Robbins and Beck.[13]

The way in which a list of teaching objectives of this sort should be used is a matter of preference and debate. Some educators, like Moore and Bobala,[14] recommend institutionalization of program goals and specific learning objectives to achieve a "competency based curriculum in geriatric medicine." Others, like ourselves, utilize a list of this sort as a "checklist" to remind the faculty of the range of educational goals and experiences that should be included in instruction in geriatrics.

Through discussions with Anne Zimmer of the National Institute on Aging, I have been interested in the book *In Search of Excellence: Lessons from America's Best Run Companies* by Peters and Waterman.[15] These authors make the point that in industry the most successful companies are those that do not adhere precisely to a long list of specifically defined objectives. Instead, these highly successful companies have developed one or two "basic values" that reflect their overall goals and operating policies. The definition of specific objectives is left to individual units or divisions. I suggest that, in teaching geriatric medicine, this approach may be equally applicable. I have attempted to develop a statement of three "basic values" which I believe undergird our own unit in Buffalo.

Basic Values of Geriatric Medicine

Good care of the elderly reflects the highest calling of the medical profession. The elderly deserve good care appropriate to their individual needs, and such care can be provided within the present health care system if the physician uses his imagination, common sense, and tries hard enough.

In the provision of this care, the physician should recognize that medicine is not the only caring profession. The development of a respectful, col-

TABLE II. LEARNING OBJECTIVES IN GERIATRIC MEDICINE FOR RESIDENTS IN INTERNAL MEDICINE

Objective (a)		*Priority rating (b), (c), (d)*	*Learning sites*
1) (0.9)	Strengthen knowledge of age-associated changes in pharmacokynetics and pharmocodynamics.	**1+	Teaching conferences
2) (0.9)	Appreciate frequency with which symptoms of the elderly are related to inappropriate use of drugs.	**1+	Nursing homes Geriatric evaluation unit Consultation Ambulatory care
3) (0.9)	Demonstrate knowledge of assessment tools and therapeutic approaches to the most common clinical problems of the elderly (incontinence, falls, osteoporosis, protein-calorie malnutrition, delirium, depression, etc.)	**1+	Geriatric evaluation unit Teaching conferences
4) (1.2)	Understand psychiatric disease in the elderly including the use of psychotropic medications, and understanding of psychiatric manifestations of physical diseases.	**2+	Geriatric evaluation unit Nursing homes
5) (1.3)	Demonstrate knowledge and application of means of evaluation of cognitive, function, mood and orientation.	**2+	Geriatric evaluation unit Consultation Ambulatory care
6) (1.3)	Demonstrate knowledge and application of the tools of functional assessment.	**1−	Geriatric evaluation unit Consultation Nursing homes
7) (1.3)	Appreciate the altered presentation and course of disease in the elderly.	**1+	Geriatric evaluation unit Teaching conferences
8) (1.3)	Appreciate the special consideration required in the diagnosis and management of multiple chronic diseases in the elderly.	**2−	Geriatric evaluation unit Nursing homes
9) (1.3)	Strengthen knowledge of the biology of aging; including changes in organ function, and diminished homeostatic ability ("Distinguish normal from pathologic aging"—Robbins).	**1+	Teaching conferences
10) (1.3)	Develop a more positive attitude toward the elderly as people, and toward provision of care to elderly people.	**2−	Ambulatory care Nursing home Geriatric evaluation unit Patient's home Teaching conferences
11) (1.5)	Plan of care: appreciate the role of hospitalization and ongoing pat-	−1+	Geriatric evaluation unit Teaching conferences

	tern of comprehensive care, including the importance of discharge planning; understand institution management strategies outside of hospitals (nursing home, day care, domiciliary, etc.).		
12) (1.6)	Rehabilitation: demonstrate knowledge of the objectives of rehabilitation in the geriatric population; appreciate the indications for the principles of physical therapy, occupational therapy, recreational therapy and speech therapy in this age group.	*3+	Geriatric evaluation unit
13) (1.6)	Understand and apply the principles of team management and care.	−3+	Geriatric evaluation unit Ambulatory care
14) (1.6)	Ethical considerations: explore one's own feelings concerning ethical principles involved in the management of elderly patients.	−3−	Geriatric evaluation unit Nursing homes
15) (1.83)	Develop an awareness of one's own attitude to aging, disability and death.	−3+	Geriatric evaluation unit Nursing Homes Ambulatory Care Teaching Conferences
16) (1.87)	Understand the importance of the social environment including community-based social support system.	*3+	Nursing homes Teaching conferences Home visits Community agencies
17) (1.87)	Home care: understand the components of and practical application of comprehensive home care; conduct home visits under supervision; recognize undue stress due to burden of home care on care giver.	NM3+	Patient's home Teaching conferences Geriatric evaluation unit Community agencies
18) (1.87)	Long-term institutional care: demonstrate the principles of management in the nonacute hospitalized patient, i.e., development of specific treatment objectives, with time projections, followed by periodic reassessment.	−3+	Nursing homes
19) (2.0)	Preventive care: demonstrate an understanding of the principles of health maintenance in the elderly, including the importance of steps which will maintain the individual's independence.	−++	Ambulatory care
20) (2.0)	Nutrition: understand the principles of nutritional assessment and management.	*3+	Geriatric evaluation unit
21)	Cost containment: understand the	*2+	Teaching conference

(2.4)	implication of cost economic factors in the management of the elderly.		
22) (3.0)	Selected use of diagnostic texts: demonstrate ability to set diagnostic and therapeutic priorities that are appropriate to the frailty of the patient and the treatability of the condition, including the omission of dangerous and unnecessary procedures.	*4+	Geriatric evaluation unit Consultation

Priority Score
1) Objectives listed in order of priority assigned by faculty members of geriatric units.
2) Priority based on responses of more than 100 geriatricians from the United States, Canada, and Great Britain.[8]
** = more than average importance
* = *average importance*
– = *less than average importance*
NM = *not mentioned*
3) Priority assigned by two chiefs of general medicine teaching services.
1 = highest priority
4 = lowest priority
+ inadvertently omitted from questionnaire
4) Are objectives included in Recommended in Core Curriculum Guidelines for Family Practice residents?
– = *not included*
+ = *included*

legial, and humble relationship with members of other caring professions is essential to a successful outcome for the patient and a rewarding experience on the part of all care providers.

Geriatric medicine, like any field of academic medicine, is based, not only on clinical experience and good teaching techniques, but also upon a continuing search for the answers to the many biological, behavioral, and socioeconomic problems that confront elderly persons and those who seek to provide their care. Thus, a strong research program is an essential component of any academic unit in geriatric medicine.

Conclusion

Establishment of mandatory rotations in geriatric medicine, at least for residents in internal medicine, is not myth nor a hope but is reality. It is now offered by 40% of the established geriatric units in this country. This represents an increase from 20% of the units, which offered programs of this sort three years ago.

Mandatory block rotations in geriatrics are much more frequently included

as part of the training program for residents in internal medicine than in family medicine. On the other hand, I believe that the curriculum design for residents in family medicine is more consonant with the overall goals of geriatric medicine than is the present pattern of graduate training in internal medicine. Therefore, it may be that other approaches to residency training in family medicine will prove more appropriate than the block-type design.

There is general agreement on learning objectives for house staff members by faculty members in this field. It may be that definition of "basic values" will prove helpful in the design of a good program in geriatric medicine. The basic values which undergird our own program have been presented.

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